

## CLAIMS

1. An insulating panel for lagging electrical equipment, the panel being based on mineral fibers, for example glass fibers, glass wool, rockwool and the like, and comprising a core (13; 113) of interconnected mineral fibers and a facing layer (9, 9') applied to at least one face of said core of mineral fibers (13; 113), characterized in that said facing layer (9; 9') comprises a woven-nonwoven (WNW), a woven mineral fiber fabric or a web of mineral fibers, and in that the facing layer is chemically bonded to the mineral fibers of the core by a mineral binder or is mechanically connected to the mineral fibers of the core.
2. The panel as claimed in claim 1, characterized in that said facing layer (9; 9') comprises a woven fabric or a web of glass fibers.
3. The panel as claimed in claim 1, characterized in that said facing layer (9; 9') comprises a woven-nonwoven (WNW) of polymer synthetic fibers, consisting in particular of derivatives of polyethylene and of polyester to which metal oxide fillers are possibly added.
4. The panel as claimed in any one of the preceding claims, characterized in that said facing layer (9; 9') has a thickness lying, by way of indication, in the range from 0.05 mm to 1.5 mm.
5. The panel as claimed in any one of the preceding claims, characterized in that said facing layer (9; 9') has a weight lying, by way of indication, in the range from 10 g/m<sup>2</sup> to 100 g/m<sup>2</sup>.
6. The panel as claimed in any one of the preceding claims, characterized in that the core of mineral

fibers has a mass per weight area of the order of 600 to 1 000 g/m<sup>2</sup>.

7. The panel as claimed in any one of the preceding  
5 claims, characterized in that the core of mineral  
fibers comprises glass fibers with a micronaire of the  
order of 3 to 4.5 under a load of 5 g.

8. The panel as claimed in any one of the preceding  
10 claims, characterized in that it comprises chemical  
binders in order both to form a chemical bond between  
the mineral fibers of the core (13) and to form a  
chemical bond between the facing layer (9; 9') and the  
mineral fibers of the core (13).

15 9. The panel as claimed in claim 8, characterized in  
that said chemical binder is a mineral binder  
consisting of an aqueous solution of aluminum  
polyphosphate salts.

20 10. The panel as claimed in any one of claims 1 to 7,  
characterized in that said mineral fibers of the core  
(113) are mechanically interconnected and in that said  
facing layer (9, 9') is mechanically connected to the  
25 mineral fibers of the core (113).

11. The panel as claimed in claim 10, characterized in  
that said mechanical connection is obtained by needle  
punching the mineral fibers together and by needle  
30 punching the mineral fibers to the facing layer (9,  
9').

12. The panel as claimed in claim 10 or 11,  
characterized in that it comprises an anti-dust agent  
35 such as Fomblin<sup>®</sup> between the mineral fibers of the core  
(113).

13. A method for producing an insulating panel based  
on mineral fibers as claimed in any one of claims 1 to

9, and which comprises the following steps:

- spinning mineral fibers (10) from a molten mineral substance (1),
- producing a chemical-type bond between said  
5 mineral fibers (10) so as to obtain a core of chemically inter-bonded mineral fibers (13; 113),
- producing a chemical-type bond between said core of mineral fibers (13; 113) and a facing layer (9, 9') positioned on at least one face of said core of mineral  
10 fibers (13; 113).

14. The method as claimed in claim 13, characterized in that said phase of bonding the mineral fibers (13; 113) together takes place at the same time as the step  
15 of bonding the mineral fibers to the facing layer (9, 9') by recourse to a chemical-type bond.

15. The method as claimed in claims 13 or 14, characterized in that said steps of chemical-type  
20 bonding involve the following phases:

- adding a mineral binder to the mineral fibers (10),
- receiving the mineral fibers (11) together with the mineral binder on a strip of said facing layer (9),
- 25 - sucking air through said facing layer (9) and then drying said mineral binders in order to create the bond between the mineral fibers and the bond between the mineral fibers and the facing layer (9).

30 16. The method as claimed in claim 15, characterized in that it further comprises the steps consisting in:

- depositing the mineral binder on a second facing layer (9') and
- applying said second facing layer (9') onto the  
35 opposite surface of the core of mineral fibers (13) to the one to which said first facing layer (9) is bonded so that said mineral binder is located between said second facing layer (9') and one face of the core of mineral fibers (13).

17. The method as claimed in claim 16, characterized in that it further comprises the step of drying said mineral binder deposited between said second facing layer (9') and a surface of the core of mineral fibers (13), by heating.

18. The method as claimed in claim 17, characterized in that said step of drying the mineral binder by heating is performed at a temperature ranging between 100°C and 200°C.

19. A method for producing an insulating panel based on mineral fibers as claimed in any one of claims 10 to 12, which comprises the following steps:

- spinning mineral fibers (10) from a molten mineral substance (1),
- producing a mechanical-type connection between said mineral fibers (10) so as to obtain a core of mechanically interconnected mineral fibers (113),
- producing a mechanical-type connection between said core of mineral fibers (113) and a facing layer (9, 9') positioned on at least one face of said core of mineral fibers (113).

20. The method as claimed in claim 19, characterized in that said phase of bonding the mineral fibers (113) together takes place at the same time as the step of bonding the mineral fibers to the facing layer (9, 9') using a connection of a mechanical type.

21. The method as claimed in claims 19 or 20, characterized in that said connection of a mechanical type is achieved by needle punching, in which hooked needles (180, 180') pass through said facing layer (9, 9') to mechanically connect the mineral fibers of the core (113) to one another and to the facing layer (9, 9').

22. The method as claimed in any one of claims 19 to 21, characterized in that it comprises the step of adding anti-dust agents to the mineral fibers prior to the mechanical-connection step.

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23. The method as claimed in any one of claims 13 to 22, characterized in that the step of spinning the mineral fibers (10) from a molten mineral substance is performed using a rotary process involving internal centrifugation.

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24. The use of an insulating panel as claimed in any one of claims 1 to 12 for lagging electrical equipment, particularly household electrical equipment, such as an electric or microwave oven, a refrigerator, a boiler, or some form of air-conditioning equipment.

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